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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/588,843
Filing Date: August 09, 2006
Appellant(s): YOKOYAMA ET AL.

Robert T. Pous
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed July 28, 2009 appealing from the Office action mailed February 5, 2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

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(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct. However it must be noted that the appellant's specification and claims use terms in a different manner than they are used in the prior art reference of Yokoyama. For example, Yokoyama has one model of a crane it states it has a 65-ton class and an 80-ton class. This is not the same use for the term "class" as put forth in appellant's claims. Appellant uses this difference to deny that the Yokoyama reference teaches the main aspect of the claimed invention.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct. However the rejection of claims 22-27 under 35 U.S.C. § 103(a) as being obvious over Yokoyama in view of Brown et al and Harrison et al is not separately argued on the merits, as to have these claims stand or fall together as a group with claim 21 from which they depend.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

U.S. Patent No. 3,184,076	Brown et al	05-1965
U.S. Patent No. 5,598,935	Harrison et al	02-1997
U.S. Patent No. 6,474,485	Yokoyama	11-2002

(9) Grounds of Rejection

The following grounds of rejection are applicable to the appealed claims.

Claims 20 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yokoyama in view of Brown et al. Yokoyama shows the basic claimed idea of having a line of cranes, using the appellant's terms from the claims, not the terms of Yokoyama, Yokoyama discloses a family of cranes

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having one class of cranes, the class further including a plurality of models (a 65-ton model and an 80-ton model), each model within the class having a different lifting capability (65 tons and 80 tons) as compared to all of the other models in the given class,

wherein all of the cranes comprise a lower traveling body (2) and an upper rotating body (5) rotatably mounted on the lower traveling body (2), the upper rotating body including a rotating frame and lifting equipment (6 and 7) mounted on the rotating frame, the lifting equipment including a boom (6) and a plurality of types of winches (7, one for raising the boom and one for raising the load hook),

wherein all of the models (the 65-ton and the 80-ton) included in the class share a common rotating frame (note that column 3, lines 61 through column 4, line 4 of Yokoyama states that the same crawler crane bodies are used for the 65-ton crane and the 80-ton crane, only the number of counterweights and the winding ability differ), the common rotating frame of each respective class having specifications based on the model of that class having the largest lifting capacity (see column 4, lines 15-37 which state that the winding ability is set to "one size up", the 80 ton capacity, and body is sized to the 65 ton capacity while having an 80 ton capacity).

Yokoyama varies from claim 20 as it only discloses one "class" of cranes with two different "models" instead of having two or more "classes" of cranes, each "class" having two or more separate "models". Brown et al teaches in column 3, lines 13-21, that;

As will be understood by those familiar with this art, crane-type vehicles of the type illustrated may be constructed of different sizes and styles. For example, many such cranes have been produced with a maximum lifting capacity of approximately five tons. In addition to these relatively light-weight cranes, however, there has recently been a trend toward the production of much larger self-propelled cranes with lifting capacities of in excess of 15 tones.

Again, this reference does not use the terms in the same manner as appellant's claims, but it teaches that one manufacturer, in addition to making a crane of one size, will make another crane of a bigger size with three times greater capacity. The greater capacity based solely on the vehicle size and style.

It would have been obvious to one of ordinary skill at the time the invention was made by applicant to modify the line of cranes taught by Yokoyama by making one or more additional "classes" of cranes, as denoted by appellant, with each of the "classes" having different vehicle sizes and styles, as to meet the needs of various customers and to maximize sales, as taught by Brown et al.

The common rotating frame of Yokoyama in each respective class would include rotating-frame-side winch mounting portions for mounting the winches on the rotating frame, each type of winch is provided with a winch-side mounting portion (inherently), the winch-side mounting portion being common to models in the same class (as the models in each class only differ by counterweight arrangements) and different for other classes (as each class has a larger vehicle frame and rotating frame, as recited in claim 21.

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Claims 22-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yokoyama in view of Brown et al, as applied above to claim 21, and further in view of Harrison et al. Yokoyama uses a common vehicle body for two different capacities of cranes. Modifying it as taught by Brown et al has one manufacturer building two or more different body styles or sizes, each body also being fitted out to raise loads in two different capacities. Yokoyama varies from claim 22 by not showing the details of the mounting arrangement for its winches as to include left and right deck frames provided on both the left and right sides of the rotating frame. However this is a conventional frame structure for a mobile crane. Figure 5 of Harrison et al shows a similar frame structure for a crane with a pair of frame members (62 and 64). It would have been obvious to one of ordinary skill at the time the invention was made by applicant to mount the winches of Yokoyama using left and right side deck frames, for ease of installation and maintenance, as taught by Harrison et al. The outer shapes and sizes of the left and right deck frames would be common to all models in the same class, (as the models in each class of Yokoyama only vary by counterweight arrangements), as recited at the end of claim 22. Harrison et al teaches having other equipment mounted on the left and right deck frames by means of mounting portions, as recited in claim 23, with the deck frames divided into a plurality of sections for the different pieces of equipment, as recited in claim 24. Sections of the left and right deck frames of Harrison et al are separately mounted on the rotating frame, such as the mounting sections for the engine 70, the hydraulic system cooler 72 and the radiator 76, as recited in claim 25, with the sections having a plurality of types for different sizes for these different pieces of equipment, as recited in claim 26. Each section of the left and right deck frames is detachably mounted on the rotating frame, as recited in claim 27.

(10) Response to Argument

Appellant begins the Argument Section of the brief by summarizing Yokoyama by stating:

Yokoyama proposes modifying a compact working machine to have a lifting capacity at least "one class up," i.e., the "80-ton class" versus the "65-ton class," so that a heavier load can be lifted without the need for a large sized crawler body which is difficult to assemble and transport. To this end, a second counterweight is provided between the lower travelling body having the crawler and the upper rotating body of a 65 ton class working machine. Additionally, the capacity of the winches of the working machine is selected according to a crane of "one class up." See the description of the "classes" of the working machines in the paragraph bridging cols. 3-4; and col. 4, lines 15-19. A higher lifting capacity is therefore possible. Col. 4, lines 23-26. On the other hand, if only the lifting capacity of a 65 ton class crane is desired, the additional counterweight need not be used. Col. 4, lines 51-59.

Appellant then states that "Accordingly, the teaching of Yokoyama is the opposite of what is claimed: Not the claimed features of a common rotating frame for models in a given lifting class, and a different rotating frame for different classes; but a common rotating frame for use in two different classes (80 ton class and 65 ton class)". However, as noted above, the term "class" is not being used the same manner in the appellant's claims as it is used in the Yokoyama reference. Appellant's last statement that Yokoyama has

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“a common rotating frame for use in two different classes (80 ton class and 65 ton class)” should be considered as Yokoyama has a common rotating frame for use in two different **models** not classes, (80 ton **model** and 65 ton **model**) when interpreting the reference while incorporating the manner in which appellant is using the terms in the claims.

Appellant argues beginning at the bottom of page 4 of the brief that “Additionally, there is no teaching in Yokoyama for the claimed feature that “the common rotating frame of each respective class [has] specifications based on the model of that class having the largest lifting capacity”. However this is answered with part of the appellant's earlier above quote from Yokoyama which states that “Yokoyama proposes modifying a compact working machine to have a lifting capacity at least “one class up,” i.e., the “80-ton class” versus the “65-ton class” and “the capacity of the winches of the working machine is selected according to a crane of “one class up”, that is to say that the rotating frame has specifications of higher of the two capacities for which it will be used. This only makes sense as one would not design the rotating frame for use to lift only 65 tons when the plan is to also lift 80 tons.

It should also be noted that this claim limitation of “the common rotating frame of each respective class having specifications based on the model of that class having the largest lifting capacity” fails to recite and specific structural features. It only states that the crane is built to specifications for the heavier loading, i.e., it is designed with the idea of not failing when lifting the heavier of the two loads which it will be lifting. Clearly the crane of Yokoyama which is intended to lift 65 tons or 80 tons is being designed to lift 80 tons without failing. Therefore it has specifications based on lifting the heavier of its two intended load capacities

Appellant argues at the lower half of page 5 of the brief that “Yokoyama touts the advantages of using a common rotating frame based on the smaller 65 ton class for higher capacity (80 ton) lifting, and so teaches away from the invention. This is not true. Yokoyama teaches one frame for both a 65-ton crane and an 80-ton crane. The same vehicle frame is used, only the counterweight arrangement and rope stretching (rigging) is changed. This is **one class** with **two different models**, even though Yokoyama uses the term “class” instead of the term “model” for describing the disclosed one common vehicle frame for two different lifting cranes.

Appellant's arguments that “Yokoyama describes that larger rotating frames cannot be used in narrow fields” and “Yokoyama thus teaches the importance of maintaining the small width of a compact crane body” do not relate to the basic teaching of the reference of having a first vehicle of one size which is used for a creating two cranes of different capacities. When appellant is arguing that the Yokoyama reference does not meet the limitations of claim 21, appellant is not arguing the combination made based

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upon the teachings of the secondary reference of Brown et al. Brown et al discusses how a manufacturer makes a line of cranes and has light-weight and larger cranes in the inventory. The entire rejection states that Yokoyama makes two different cranes on one single vehicle frame. Brown et al teaches making two different sized vehicle frames. Taken together, Yokoyama and Brown et al have a combination of two different crane vehicles, each used for two different capacity cranes.

Appellant states that "Brown et al merely teaches that cranes "may be constructed in many different sizes and styles," e.g., 5 ton or 15 ton and that "Appellants do not disagree that it would be obvious, with or without the teachings of Brown et al, for a manufacturer to "manufacture both light-weight cranes and larger cranes" according to customer needs." Appellant continues by stating that "this teaching would not have rendered it obvious for one skilled in the art to modify Yokoyama according to the subject matter of Claim 20" because Yokoyama does not "provide that all models in a class share a common rotating frame". Once again, appellant is using the fact that term "class" is used in a different manner in the Yokoyama reference to miss-state the idea disclosed in the reference. Yokoyama teaches one single class of cranes which uses one single vehicle body. It has one single common rotating frame used for all of the cranes disclosed in the reference. When the reference discusses a 65-ton class crane and an 80-ton class crane it is discussing the same idea of a crane with at least two models of differing capacity. When Yokoyama discusses the 65-ton class and the 80-ton class crane, it is the same idea as part of appellant's claimed invention. Think of Yokoyama as having a 65-ton **model** crane and an 80-ton **model** crane with both having a common vehicle as to both have a common rotating frame. Then Yokoyama has one class with two models using the nomenclature of appellant's claims. The overall rejection takes this structure and states now make two different vehicles of the type of Yokoyama. This is taught by Brown et al which states that some customers want light-weight cranes and some customers want heavy lift cranes.

Appellant argues on page 6 of the brief that claim 21 further recites a winch mounting which is the opposite of that disclosed by Yokoyama and cites a portion of the reference that has nothing to do with the rejection. Claim 21 recites that the common rotating frame has one winch mounting which can be used for mounting the winches that will be used on that frame. Figures 1A and 1B of Yokoyama show the winches (7) mounted to the common frame used for both cranes (65-ton and 80-ton) of that reference. Appellant again relies on the differing use of the term "class" to deny that Yokoyama has the structure of one single common crane body for use with two different classes or models of cranes.

Appellant argues at the bottom of page 6 of the brief that claims 22-27 are rejected by further incorporating the reference of Harrison et al. Appellant states that "Harrison et al does not overcome the

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shortcomings of Yokoyama and Brown et al with respect to Claim 21", and does not specifically argue the specific limitations of these claims as to have them stand or fall as a group with claim 21.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

(12) Conclusion

Appellant is using the term "class" in a different manner than it is used within the prior art reference of Yokoyama. By continuously using the term "class" as if it meant the same in the Yokoyama reference as it is used in the claims, the appellant is interpreting this reference in a misleading manner. The Yokoyama reference clearly teaches using a single common vehicle body with a single common rotating upper works to provide a base which is used with two different cranes. The two different cranes have different capacities, 65 tons and 80 tons. Modifying this structure as to have its manufacturer also build a second similar crane having a vehicle body sized and styled to have a different lifting capacity than the first vehicle, as to offer a line of cranes that meets the needs of different customers, is clearly taught by the Brown et al reference.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Thomas J. Brahan/
Primary Examiner, Art Unit 3654

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